

REMARKS

Claims 1, 2 and 4-6 are pending in this application, of which claims 1 and 6 have been amended. No new claims have been added.

Claims 1-2 and 4-5 stand rejected under 35 USC §103(a) as unpatentable over Masatoshi (previously applied).

Applicants respectfully traverse this rejection.

As noted in Applicants' previous response of August 18, 2003, Masatoshi discloses a PLL circuit in which a control signal "A", which is outputted from a low-pass filter 16, is inputted to a control circuit 20. The circuit 20 detects a voltage level of the control signal "A" and detects whether or not a PLL circuit 10 is in a deadlock state. If the circuit 10 is in a deadlock state, the circuit 20 outputs a detection signal which is in an active state to recover it into a normal locked state. That is, the voltage level of a control signal detects that the circuit 10 reaches a certain voltage level where there is a possibility that it falls into a deadlock state and further, that it is in a deadlock state, and reduces the voltage level of the control signal "A".

Thus, Masatoshi restores the abnormal operation of the entire circuit to the normal state although different in its means of doing so from the present invention; that is, when the VCO ceases to oscillate a comparison signal f_c and the control voltage V_c issued from the loop filter reaches or exceeds a predetermined level, a detection signal is fed to the charge pump circuit to lower the control voltage such that the oscillation is restored.

In this respect, the present invention claims the detection being effected on the basis of an output signal from the voltage control oscillator or the frequency divider. In Masatoshi, on the

other hand, the detection signal is not issued unless the VCO ceases to oscillate and then, the control voltage of VCO reaches or exceeds a predetermined level. Such a roundabout procedure of monitoring of the control voltage causes delay or unevenness in detection unlike the direct way as claimed.

In this way, the present invention has an improved and faster way of detecting the malfunction of the VCO than can be obtained by Masatoshi.

In summary, in Masatoshi, the control signal A is outputted from the LPF. This is in contrast to the present invention, in which the detection is effected on the basis of only an output signal from said voltage control oscillator or frequency divider. No control signal is outputted from the LPF in the present invention.

The Examiner has urged that "DRAWING 2 of Masatoshi shows control means 20 also affected by the output of VCO 18". Because "DRAWING 2" has Japanese labels, Applicants are not sure what it shows, but Fig. 1 of Masatoshi definitely shows control signal A outputted from the LPF.

Accordingly, claim 1 has been amended to recite that detection is effected on the basis of only an output signal from said voltage control oscillator or said frequency divider.

Thus, the 35 USC §103(a) rejection should be withdrawn.

The Examiner has indicated that claim 6 would be allowable if rewritten in independent form.

Accordingly, claim 6 has been so amended.

In view of the aforementioned amendments and accompanying remarks, claims 1-2 and 4-

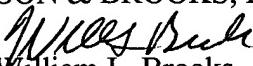
6, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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